



(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
04.05.2011 Bulletin 2011/18

(51) Int Cl.:
B65D 75/58 (2006.01) B65D 77/00 (2006.01)

(21) Application number: **10181784.9**

(22) Date of filing: **16.04.2004**

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PL PT RO SE SI SK TR
Designated Extension States:
AL HR LT LV MK

- **Stiener, Joseph**
Warren, NJ 07059 (US)
- **Flynn, Charles Francis IV**
Oak Ridge, NJ 07438 (US)
- **Mandle, James Spencer**
Woodcliff Lake, NJ 07677 (US)

(30) Priority: **16.04.2003 US 414502**

(62) Document number(s) of the earlier application(s) in accordance with Art. 76 EPC:
04252257.3 / 1 468 936

(74) Representative: **Smaggasgale, Gillian Helen**
W.P. Thompson & Co
55 Drury Lane
London WC2B 5SQ (GB)

(71) Applicant: **Kraft Foods Global Brands LLC**
Northfield, IL 60093 (US)

Remarks:

- Claims filed after the date of filing of the application (Rule 68(4) EPC).
- This application was filed on 29-09-2010 as a divisional application to the application mentioned under INID code 62.

(72) Inventors:
• **Sierra-Gomez, Gladys Odette**
Woodbridge, NJ 07095 (US)
• **Peters, Eva Marie**
Cedar Grove, NJ 07009 (US)

(54) **Resealable food container**

(57) A container (10) for a food product includes a wrapper (11) which surround a frame (30). The container (10) can be any polygonal shape which is defined by the shape of the frame (30). The wrapper (11) forms a top (12) of the container (10) which has an access opening (18). A sealing layer (20) is adhesively seated to the top (12) around the opening (18). The sealing layer (20) is

resealable when a tab (22) of the sealing layer (20) is pulled back. The sealing layer (20) is resealable against the top layer (12) to seal the opening (18) when the sealing layer (20) is moved back to a flat position on the top (12). Various tamper-evident structures (44) are provided to indicate when the container (10) has been initially opened or tampered with.

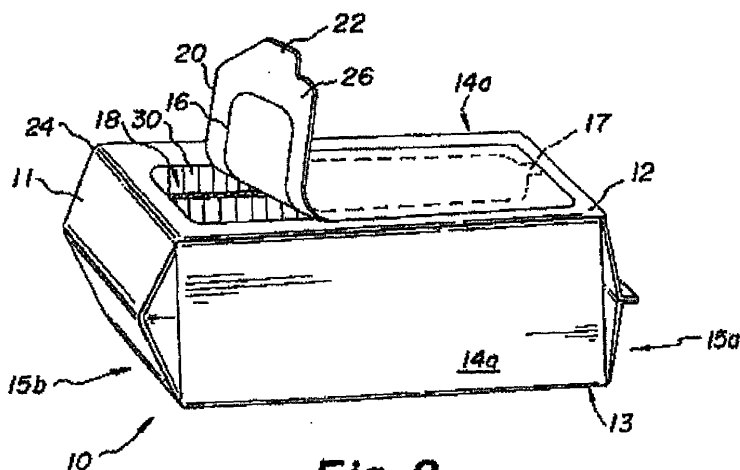


Fig. 2

Description

FIELD OF THE INVENTION

[0001] The present invention relates to a resealable container, and in particular, a new and improved resealable container having a reclosable sealing layer which can be pulled back and reclosed against a top portion of the container.

BACKGROUND OF THE INVENTION

[0002] Containers for food products such as cookies and other snacks typically include a frame surrounded by an outer wrapper. The frame acts as a tray to hold the food product and to protect the food-product from damage. One normally gains access to the contents of the container by opening one end of the wrapper, withdrawing the tray from the inside thereof, and then removing the food product from the tray. However, these containers generally do not provide a convenient opening and reclosing arrangement. For example, reclosing of the wrapper, once opened, generally includes simply folding or rolling the end down and clipping the end to keep the wrapper closed.

[0003] Reclosable seals have been used for dispensing bags for wet tissue or disposable cleaning wipes. The label on these bags can be pulled back thereby exposing an opening, allowing access to the wet tissues or wipes inside. Typically, these dispensing bags are completely flexible, formed exclusively of a plastic or other suitable flexible material which closely surrounds the pack of wet tissues or wipes. Examples of these dispensing bags include U.S. Patent Nos. 4,840,270 and 6,026,953, U.S. Design Patent No. D 447,054 and U.S. Patent Application Publication No. 2002/0182359. However, such known dispensing bags are not well suited for containing food products as these containers fail to provide adequate protection for storing food products.

SUMMARY OF THE INVENTION

[0004] The purpose of the present invention is to provide a new and improved container for food products such as cookies and the like, which container provides adequate protection for the contents thereof, while concurrently facilitating opening of the container wrapper and resealing the seal to protect the contents thereof until the contents are fully consumed.

[0005] This purpose is achieved by providing a suitable container for such food products, in combination with an easily accessible opening seal formed in a surface other than an end surface, which seal can reclose the container during use.

[0006] In accordance with one embodiment, the present invention comprises a polygonal shaped food container having a frame defining the polygonal shape of the container which contains the food product. A wrap-

per surrounds the frame and forms a top of the container. The top has an access opening so as to provide hand access to food contents of the container. A sealing layer is adhesively seated to the top around the opening. The sealing layer is releasable from the top when a tab of the sealing layer is pulled back and is reclosable against the top to seal the opening when the sealing layer is moved back to a flat position on the top.

[0007] In accordance with a further form of the present invention, the food container includes a tamper-evident structure. In various different alternate embodiments, the tamper-evident structure may include tamper-evident tape or scored seal tape extending along at least a portion of a perimeter where the scoring tape contacts the top, a removable film disposed under the seating layer, a membrane sleeve encircling the wrapper over the sealing layer, or an overwrap surrounding the wrapper.

[0008] In accordance with another aspect of the present invention, a rectangular food container includes a frame defining the rectangular shape of the container which contains the food product. A wrapper surrounds the frame and forms a top of the container. The top has an access opening so as to provide hand access to food contents of the container. A sealing layer is adhesively sealed to the top around the opening. The sealing layer is releasable from the top when a tab of the sealing layer is pulled back and reclosable against the top to seal the opening when the sealing layer is moved back to a flat position on the top.

[0009] In accordance with another aspect of the present invention, a polygonal shaped food container comprises a frame defining the polygonal shape of the container which contains the food product. A wrapper surrounds the frame and forms a top of the container. The top has an access opening so as to provide hand access to food contents of the container. A sealing layer is adhesively sealed to the top around the opening. The sealing layer is releasable from the top when a tab of the sealing layer is pulled back and reclosable against the top to seal the opening when the seating layer is moved back to a flat position on the top. A tamper-evident structure is associated with the sealing layer.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] The invention will now be described in detail with respect to preferred embodiments with reference to the accompanying drawings, wherein:

Figure 1 is a perspective view of a resealable container in a closed configuration in accordance with the present invention;
 Figure 2 is a perspective view of the container of Figure 1 in a partially opened configuration;
 Figure 3 is a perspective view of a frame of the container of Figures 1 and 2;
 Figure 4a is a perspective view of a resealable food container having tamper-evident tape extending

along a portion of a top of the container with the container depicted in a sealed configuration;

Figure 4b is a perspective view of the container of Figure 4a with the tamper-evident tape partially withdrawn;

Figure 5a is a perspective view of a resealable container with a tamper-evident removable film where the container is depicted in an unopened configuration;

Figure 5b is a perspective view of the container of Figure 5a depicted in a partially opened configuration;

Figure 6 is a perspective view of a resealable container having a tamper-evident membrane sleeve encircling the container;

Figure 7 is a perspective view of a resealable container having a tamper-evident scored seal tape extending along a portion of a top of the container;

Figure 8 is a perspective view of a resealable food container having a tamper-evident overwrap surrounding the container;

Figure 9 is a perspective view of a polygonal shaped resealable food container in accordance with another embodiment of the present invention;

Figure 10 is a perspective view of a different polygonal shaped resealable food container;

Figure 11 is a perspective view of a frame for a resealable food container in accordance with the present invention;

Figure 12 is a perspective view of another frame for a resealable food container; and

Figure 13 is a perspective view of another different frame for a resealable food container.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS OF THE INVENTION

[0011] Referring now to the drawings, like numbers represent like elements throughout the several views.

[0012] Referring now specifically to Figures 1 and 2, resealable container 10 includes a wrapper 11 which forms top 12, bottom 13, opposing sides 14a and 14b, and opposing ends 15a and 15b. The top 12 has a flap 16 with a tapered end 17. The flap 16, when pulled back from the container 10, forms an opening 18.

[0013] A sealing layer 20 is affixed to the flap 16. Advantageously, the sealing layer 20 is permanently affixed to the flap 16 using an appropriate adhesive. The sealing layer 20 covers a substantial portion of the top 12 extending from the proximity of end 15b to the proximity of end 15a.

[0014] Graphics may be formed on the sealing layer 20 which align with corresponding graphics on top 12 when the sealing layer 20 is sealed or in a flat position on top 12. Alternatively, sealing layer 20 may be transparent, allowing graphics of top 12 to be visible through sealing layer 20.

[0015] Tab 22 extends or projects past corner 24. As

a result, tab 22 can be grasped from above and below by ones fingers and/or thumb thereby the tab 22 is easily accessible for one to pull.

[0016] Adhesive 26 is applied to the surface of sealing layer 20 which is in contact with top 12. Advantageously, the adhesive 26 provides a removable seal between the sealing layer 20 and top 12.

[0017] Container 10 is transformed from a closed configuration depicted in Figure 1 to a partially opened configuration depicted in Figure 2 by grasping the tab 22 between ones fingers and/or thumb and pulling back on the sealing layer 20 to gain access to opening 18. Once container 10 is opened, one can remove individual food product contained inside the container 10 through opening 18.

[0018] Wrapper 11 surrounds a frame 30 which forms a tray for the contents of the food to be placed. Referring to Figure 3, the frame 30 is composed of a rigid material which forms the shape of the container 10. Suitable rigid material includes plastics and cardboard. Frame 30 includes ends 31a and 31b a divider 32 which dividers the frame 30 into a first section 34 and a second section 36.

[0019] Frame 30 can be any polygonal shape such as the rectangular shape depicted in Figure 3. Accordingly, the rectangularly shaped frame 30 forms a rectangularly shaped container 10. Alternately, different polygonal shaped frames will form containers having the corresponding polygonal shape.

[0020] In various further embodiments, one or more tamper-evident structures are provided in an effort to indicate whether the container 10 has been previously opened or in some manner been tampered with.

[0021] Referring to Figures 4a and 4b, in one form, the tamper-evident structure includes tamper-evident tape 42 which is applied along two portions of the perimeter 45 where the sealing layer 20 contacts the top 12. The tamper-evident tape 42 must be removed prior to or at the same time the sealing layer 20 is pulled back for the first time. Once the tamper-evident tape 42 is peeled back from the wrapper 11, indicia 44 from the tamper-evident tape 42 remains on the top 20 as evidence that the tamper-evident tape 42 had been previously removed. For example, the indicia of lettering "OPENED" 46 in Figure 4b evidences that the tamper-evident tape 42 has been removed.

[0022] Referring to Figures 5a and 5b, in an alternative tamper-evident structure, container 50 includes a film 52 disposed under the seating label 20. The film 52 may be plastic or foil and includes a film tab 54 which one pulls to remove the film 52. In use, one opens the container 50 as container 10 and then removes and discards the removable film 52 to gain access to the food contents contained within the container 50. To reseal the container 50, sealing layer 20 is moved back to a flat position as depicted in Figure 5a.

[0023] Referring now to Figure 6, in an alternative tamper evident structure, container 60 includes a membrane sleeve 62 which is shrink wrapped around the

wrapper 11. A pair of parallel perforations 64 are scored in the membrane sleeve 62 which allow one to tear open the membrane along the perforations 64. After the membrane sleeve 62 has been removed, the membrane sleeve 62 is discarded. Then, one opens the container 60 as container 10 as previously described.

[0024] Referring now to Figure 7, in yet another tamper-evident structure includes scored seal tape 72 which is placed along two portions of the perimeter 75 where the sealing layer 20 contacts the top 12. When the sealing layer 20 is pulled back from the top 12 for the first time, portion 74 of the scored seal tape 72 remains on top 12 thereby indicating that the seal layer 20 previously has been removed from the container 70.

[0025] Referring now to Figure 8, in yet another tamper-evident structure, container 80 includes an overwrap 82 which completely surrounds the wrapper 11. To gain access to the food product in container 80, one breaks open and discards overwrap 82. Then, one opens the container 80 as container 10 by pulling back on tab 22 to withdraw sealing layer 20 from the top 12.

[0026] In an alternative embodiment, rather than a rectangular container, the container may be in the form of any polygonal shaped container although rectangular which includes square is the preferred polygonal shape. As previously discussed, the polygonal shape of the container takes its form from the frame which is covered by a wrapper. For example, referring to Figure 9, container 90 is a triangular shaped polygonal container formed by wrapper 91 surrounding frame 92. In an alternative polygonal shape depicted, Figure 10 depicts container 100 in the shape of a hexagon defined by wrapper 101 which surrounds frame 102. As in the embodiment of Figures 1 and 2, one gains access to the contents of containers 90, 100 by pulling back on tabs 94, 104 of sealing layer 96, 106, respectively.

[0027] In other alternative embodiments, other frames other than frame 30 which has a single divider 32, extending longitudinally along the length of the frame 30 can be used to form resealable containers. For example, referring to Figure 11, frame 110 includes a plurality of dividers 112 which extend transversely across the width of the frame 110. Alternatively, frame 120 includes a plurality of dividers 122 extending transversely across the frame 120 (Figure 12) and frame 130 (Figure 13) does not include a divider at all. Selection of a particular frame depends on the desired use. Further, the various frames may include ends such as frames 30, 110 and 120 which have ends 31a, 31b, 111a, 111b, 121a, 121b; or the frame may be opened at the ends such as frame 130 with opened ends 131a, 131b.

[0028] The present invention offers numerous features and advantages over previous food containers. For example, in one form, the present invention includes a tab element which extends beyond a corner of a top or side of the container which makes the tab easily accessible for being grasped and for withdrawing a sealing layer from the container.

[0029] An additional feature of the present invention is provided by a resealable sealing layer which can be pulled back and then resealable against a top portion of the container. This configuration makes it possible to gain easy access to the food product within the container without having to open the end at the container, withdraw a tray containing the food product, remove the food product from the tray, return the tray back to the container, and close off the end of the bag.

[0030] A further feature of one form of the present invention is provided by a tamper-evident structure which indicates whether the container has been previously opened or otherwise tampered. This tamper-evident structure allows a consumer to know whether the container has been previously opened. Further, the tamper-evident structure helps ensure that the contents are fresh by indicating whether the container has been previously opened.

[0031] Although the invention has been described in detail with respect to the preferred embodiments thereof, it will be apparent to one of ordinary skill in the art that the invention is capable of numerous modifications and variations within the scope and spirit of the invention.

1. A polygonal shaped food container comprising:

a frame defining the polygonal shape of the container which contains the food product;
a wrapper surrounding said frame, said wrapper forming a top of the container;
said top having an access opening so as to provide hand access to food contents of the container; and
a sealing layer, adhesively sealed to said top around said opening, said sealing layer being releasable and reclosable against said top to seal said opening when said sealing layer is moved back to a flat position on said top.

2. The polygonal shaped food container of clause 1, wherein said top of said wrapper comprises a flap having substantially the same dimension as said opening and affixed to said sealing layer.

3. The polygonal food container of clause 1, wherein said sealing layer covers essentially the entire top.

4. A polygonal shaped food container according to any one of clauses 1 to 3, wherein said sealing layer includes a tab, said sealing layer being releasable when said tab is pulled back and reclosable against said top to seal said opening when said sealing layer is moved back to a flat position on said top.

5. The polygonal shaped food container of clause 4, wherein said tab projects past a corner of said top and one side of the container, and said tab is acces-

sible beyond the corner to be grasped.

6. The polygonal shaped food container of any one of clauses 1 to 5, wherein said top of the container includes graphics around said opening, and said sealing layer includes graphics which match the graphics on said top.

7. The polygonal shaped food container of any one of clauses 1 to 6, wherein said sealing layer is transparent.

8. The polygonal shaped food container of any one of clauses 1 to 7, further comprising a tamper-evident structure.

9. The polygonal shaped food container of clause 8, wherein the tamper-evident structure is associated with the sealing layer.

10. The polygonal shaped food container of clause 9, wherein said tamper-evident structure comprises tape extending along at least a portion of a perimeter where said sealing layer contacts said top, along both said sealing layer and said top, said tamper-evident tape having to be removed prior to or at the same time said sealing layer is pulled back for a first time, said tape leaving an indicia on said top after said tape is removed.

11. The polygonal shaped food container of clause 9, wherein said tamper-evident structure comprises a removable film disposed under said sealing layer, said film having to be removed to gain access to the contents of the container.

12. The polygonal shaped food container of clause 8 or 9, wherein said tamper-evident structure comprises a membrane sleeve encircling said wrapper over said sealing layer, said membrane sleeve having to be removed prior to pulling back said sealing layer.

13. The polygonal shaped food container of clause 9, wherein said tamper-evident structure comprises scored seal tape extending along at least a portion of a perimeter where said sealing layer contacts said top, along both said sealing layer and said top, said scored tape having to be removed prior to or at the same time said sealing layer is pulled back for a first time, said scored seal tape leaving a portion of the scored seal tape on said top after said scored seal tape is removed.

14. The polygonal shaped food container of clause 8 or 9, wherein said tamper-evident structure comprises an overwrap surrounding said wrapper.

15. The polygonal shaped food container of any one of clauses 1 to 14, wherein said frame forms a tray for the food contents.

16. The polygonal shaped food container of any one of clauses 1 to 14, wherein the container is rectangular.

10 Claims

1. A polygonal shaped food container (10) comprising:

a frame (30) defining the polygonal shape of the container (10), said container (10) having a top (12), a bottom (13) and sides (14a, 14b, 15a, 15b) connecting the top (12) and bottom (13), the frame (30) containing a food product comprised of discrete food articles;

a wrapper (11) surrounding said frame (30), said wrapper (11) forming the top (12), sides (14a, 14b, 15a, 15b) and bottom (13) of the container; said top (12) having a flap (16) which can be pulled back to form an access opening (18) sufficiently large to provide hand access to substantially all of the discrete food articles contained within the frame (30), such that substantially any one of the discrete food articles can be accessed and removed individually through said access opening (18); and

a sealing layer (20) adhesively sealed to the flap (16) with a first adhesive strength and adhesively sealed to said top (12) around said opening (18) with a second adhesive strength, the first adhesive strength being greater than the second adhesive strength, said sealing layer (20) including a starter portion (22) located near a side of the top (12) which can be grasped by a user, said sealing layer (20) being releasable when said starter portion (22) is pulled in a direction away from said side to in turn pull and thereby release at least a portion of said sealing layer (20) sealed to the top (12) around said opening (18) having the second adhesive strength to provide the hand access to said top access opening (18) and reclosable against said top (12) to seal said opening (18) when said sealing layer (20) is moved back against the said top (12).

2. The polygonal shaped food container (10) of claim 1, wherein the flap (16) remains attached to the sealing layer (20) when the portion of the sealing layer (20) is released to provide the hand access to the top access opening (18).

3. The polygonal shaped food container (10) of claim 2, wherein the sealing layer (20) is permanently sealed to the flap (16) and the sealing layer (20) is

removably sealed to the top (12) around the access opening (18).

4. The polygonal shaped food container (10) of claim 1, wherein said starter portion (22) comprises a tab (22) which projects past an edge of said top (12) at one side of the container (10), said tab (22) being accessible beyond the edge to be grasped. 5
5. The polygonal shaped food container (10) of claim 1, further comprising tamper-evident means. 10
6. The polygonal shaped food container (10) of claim 1, wherein said starter portion (22) comprises a tab (22) and wherein the starter portion (22) is free from the remainder of the container (10) such that it can be grasped simultaneously from above and below to open the container (10). 15
7. The polygonal shaped food container (10) of claim 1, wherein said sealing layer (20) covers substantially the entire top (12). 20
8. The polygonal shaped food container (10) of claim 1 wherein the frame (30) has an upper periphery portion and the top (12) has a pair of facing perimeter portions adjacent the access opening (18), the pair of facing perimeter portions extending inward beyond at least a portion of the upper periphery portion to capture the frame (30) in the wrapper (11) against unintentional removal through the access opening (18). 25 30
9. The polygonal shaped food container (10) of claim 8 wherein the facing perimeter portions extend to additional perimeter portions, the perimeter portions combined to surround the access opening (18), and the perimeter portions all extend inward beyond the upper periphery portion to capture the frame (30) in the wrapper (11) against unintentional removal through the access opening (18). 35 40
10. The polygonal shaped food container (10) of claim 8 wherein the sealing layer (20) is releasably sealed adhesively to the perimeter portions. 45
11. The polygonal shaped food container (10) of claim 8 wherein the wrapper (11) is unattached to the frame (30) and defines an outer profile for the container (10) extending at least in part outwardly from the frame (30) at an end of the container (10) and the wrapper (11) is sealed to itself at the end of the container (10). 50
12. The polygonal shaped food container (10) of claim 8 wherein the frame (30) has at least one divider (32) to separate discrete food articles and wherein the discrete food articles are cookies susceptible to dam-

age and the frame (30) and the wrapper cooperate to protect the cookies from damage.

13. The polygonal shaped food container (10) of claim 1 wherein:
the frame (30) has a bottom, sides (31a, 31b) and an upper periphery portion;
the wrapper (11) is unattached to the upper periphery portion of the frame (30) and at the top of the container (10) having at least a pair of facing perimeter portions each spanning inward from the periphery portion of the frame (30) to an adjacent edge of the access opening (18), the upper periphery portion of the frame (30) and an inward dimension of the facing perimeter portions of the wrapper (11) cooperating to locate the facing perimeter portions to permit the sealing layer (20) to be resealable to the facing perimeter portions of the wrapper (11) when the sealing layer (20) is moved back against the top (12). 5
14. The polygonal shaped food container (10) of claim 1 wherein the access opening (18) has a tapered end opposite the starter portion (22) of the sealing layer (20) and wherein the tapered end of the access opening (18) has a pair of segments that taper toward each other and away from the starter portion (22). 10
15. The polygonal shaped food container (10) of claim 1 wherein the sealing layer (20) has a first adhesive zone coextensive with the flap (16) and adhered to the flap (16) using a first adhesive strength and a second adhesive zone outward of the periphery of the flap (16) and adhered to the top (12) using a second adhesive strength, the first adhesive strength being greater than the second adhesive strength such that the portion of the sealing layer (20) outward of the periphery of the flap (16) can be released to provide the hand access to the top access opening (18) with the flap (16) remaining attached via the second adhesive zone to a portion of the sealing layer (20) coextensive with the flap (16). 15 20 25 30 35 40 45 50 55

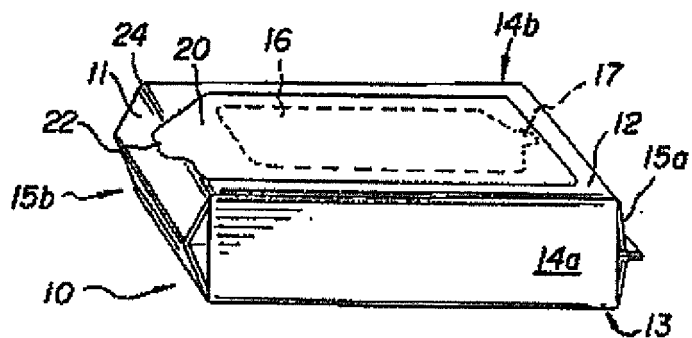


Fig. 1

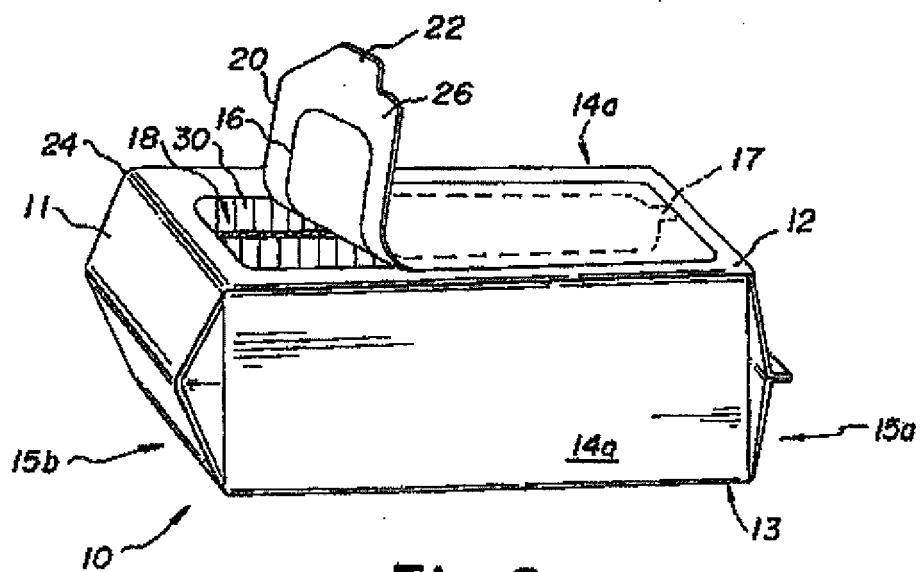


Fig. 2

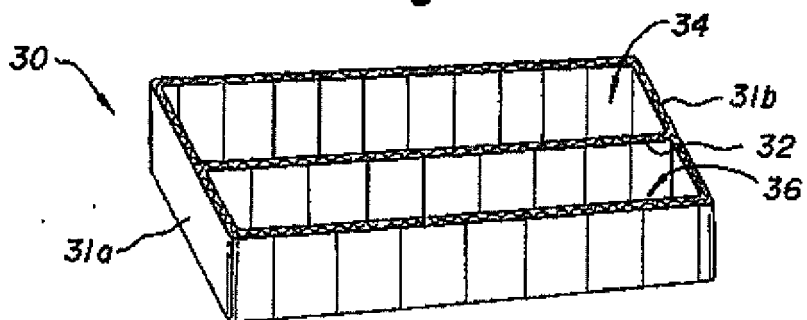
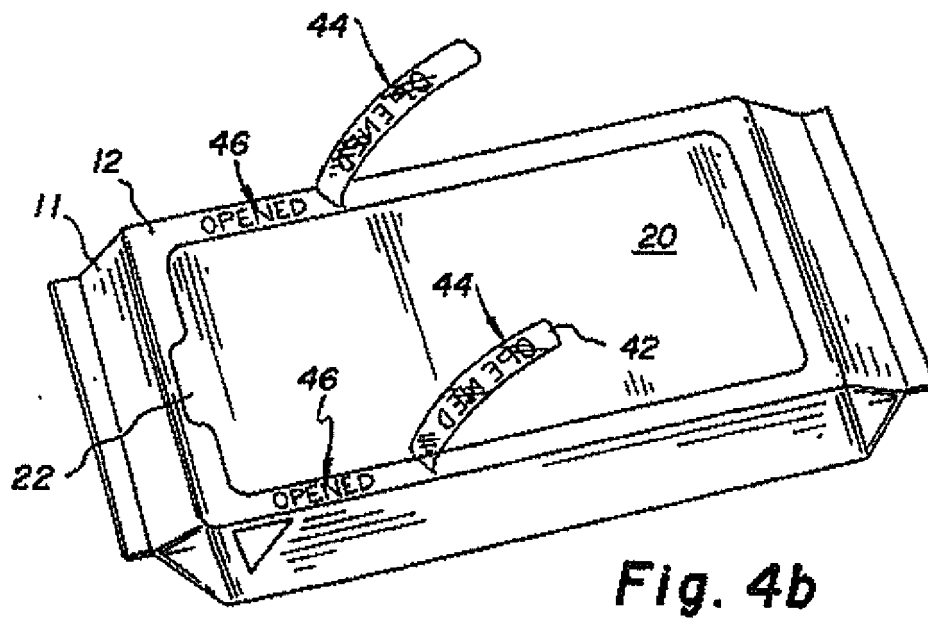
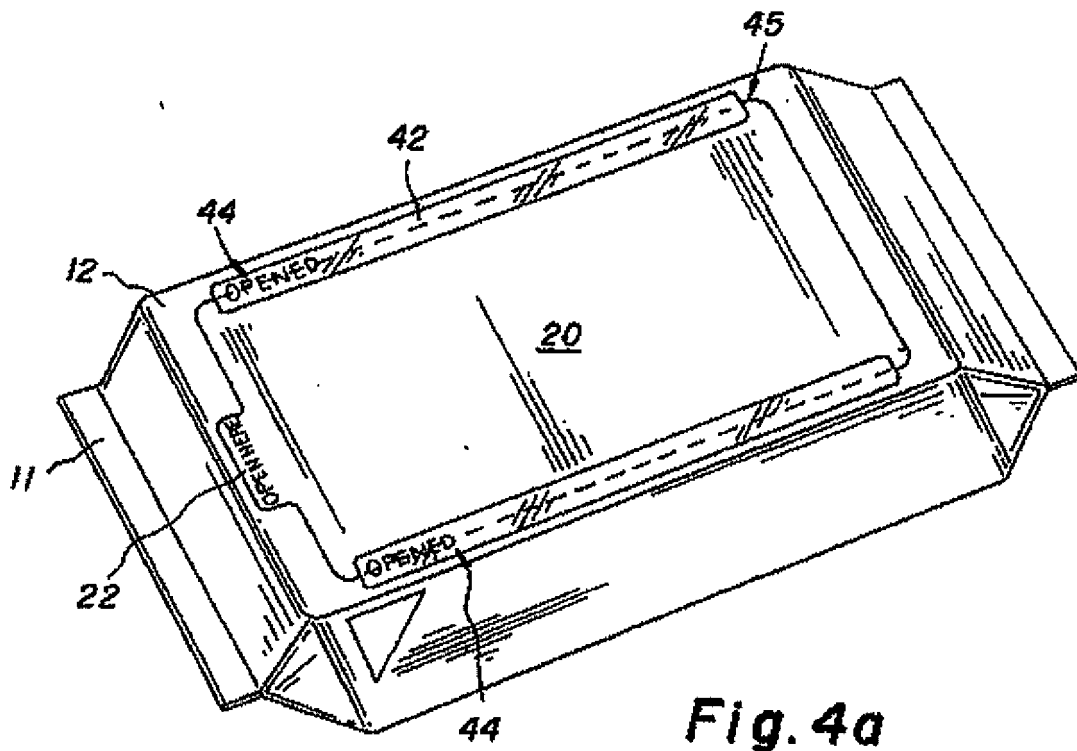
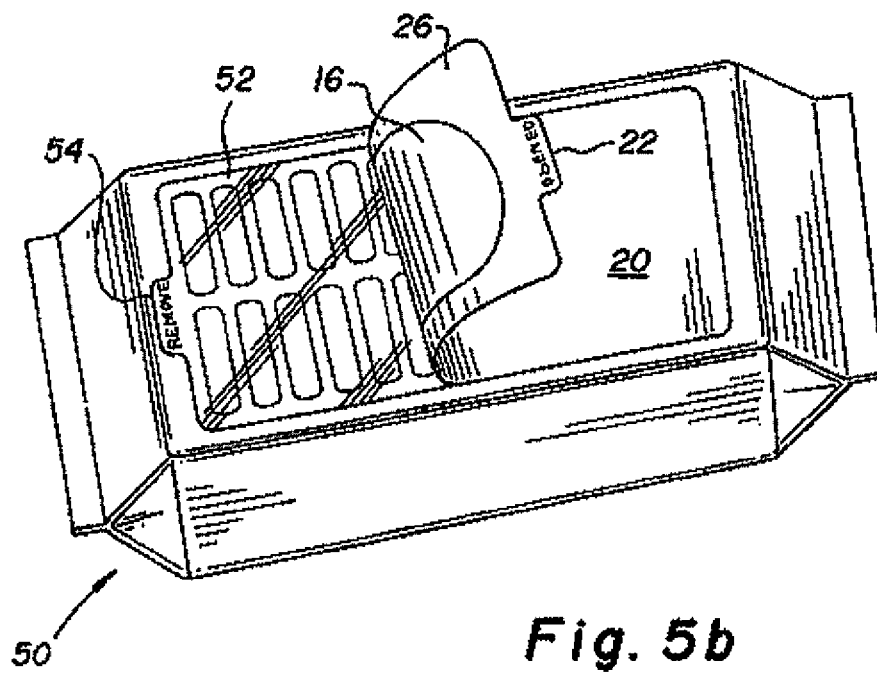
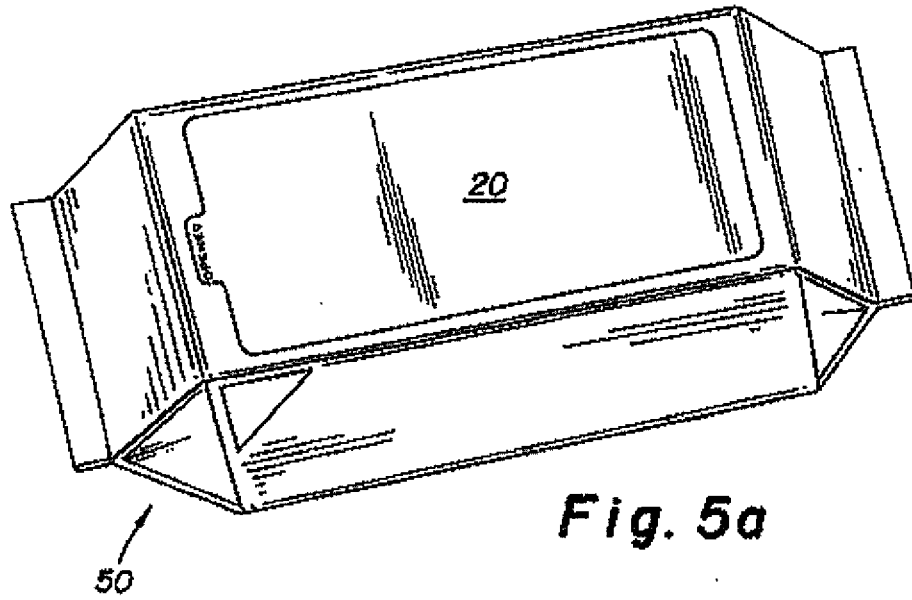


Fig. 3





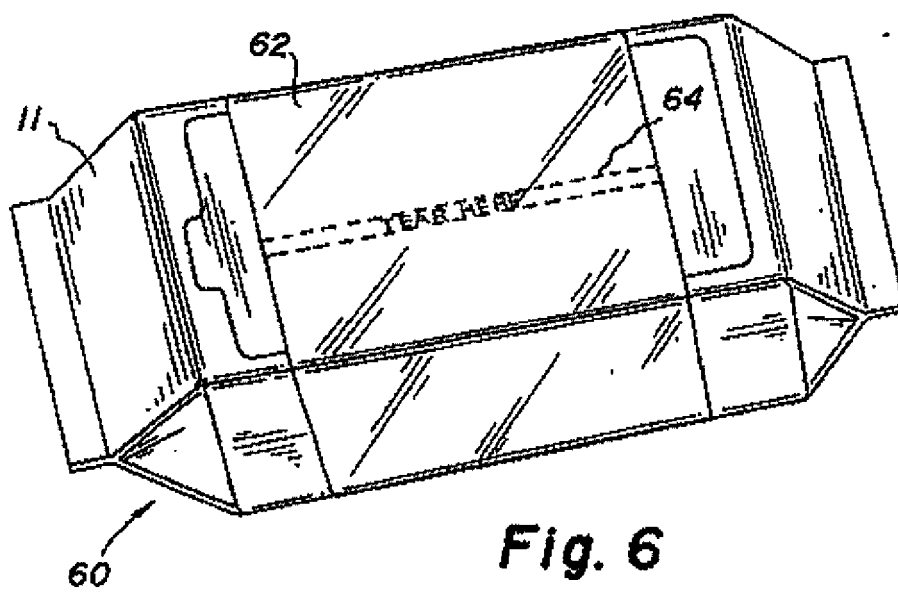


Fig. 6

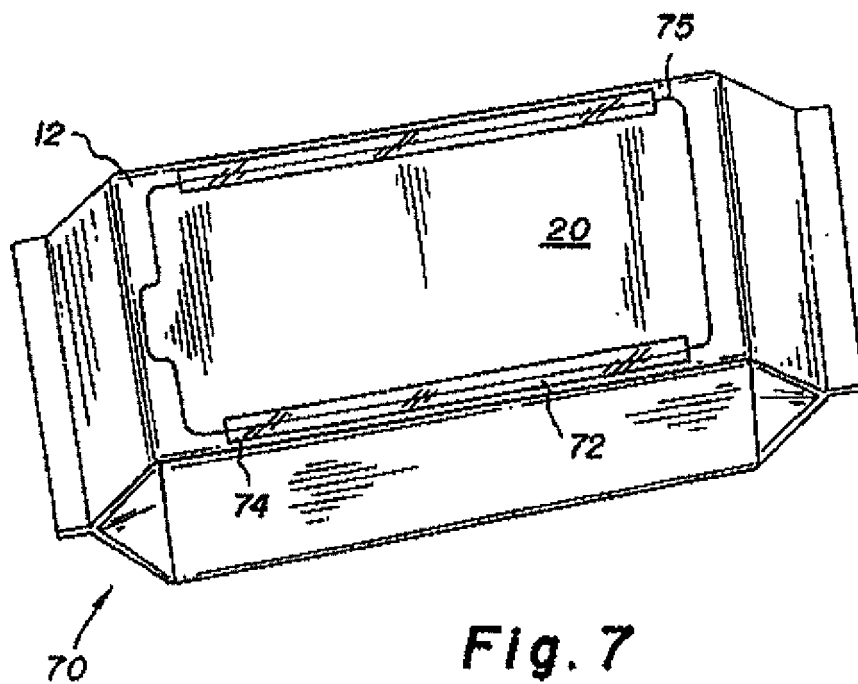


Fig. 7

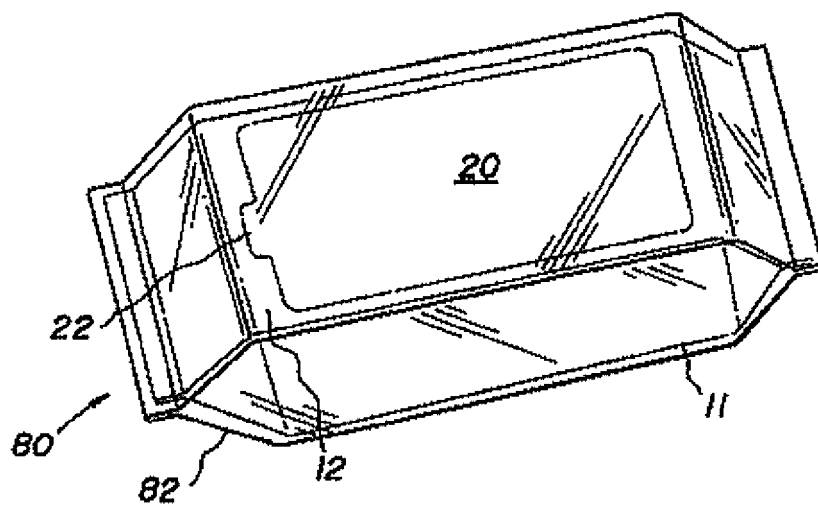


Fig. 8

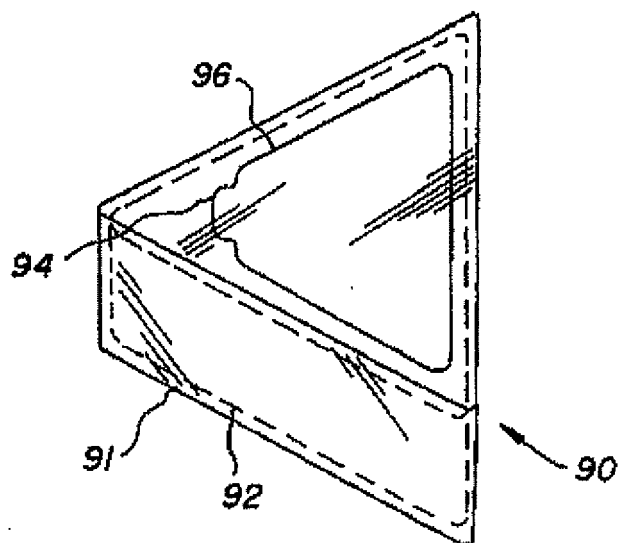


Fig. 9

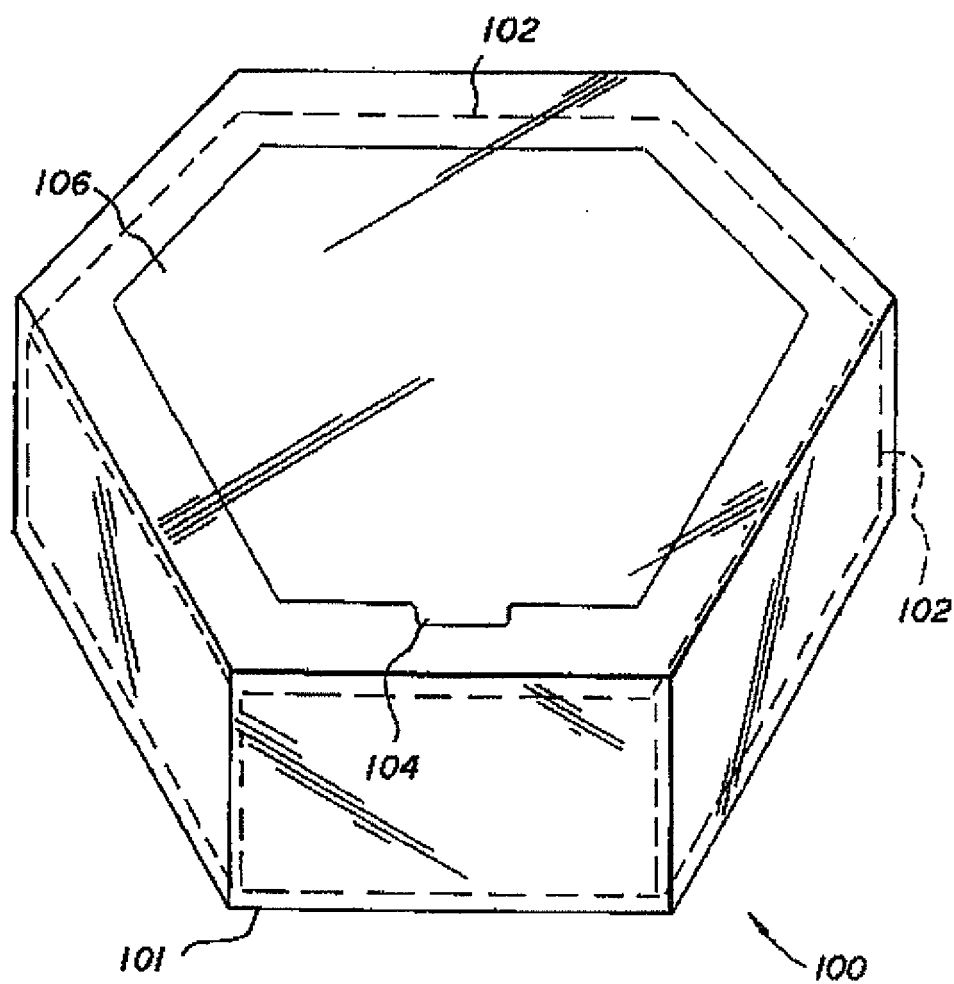


Fig. 10

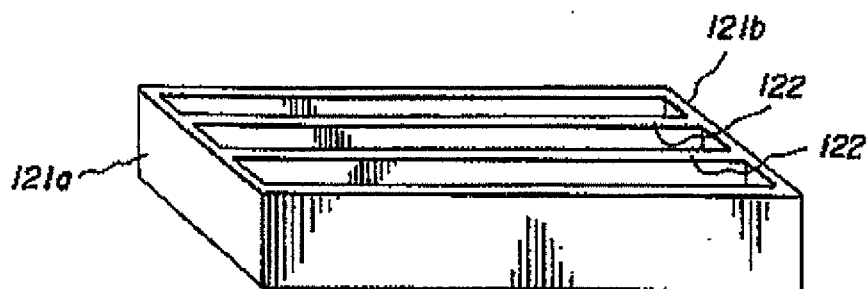


Fig. 12

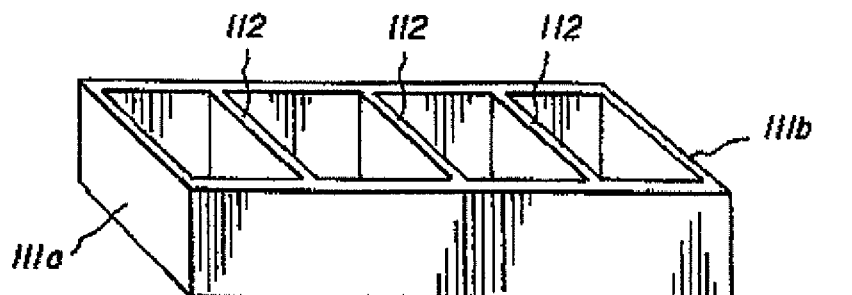


Fig. 11

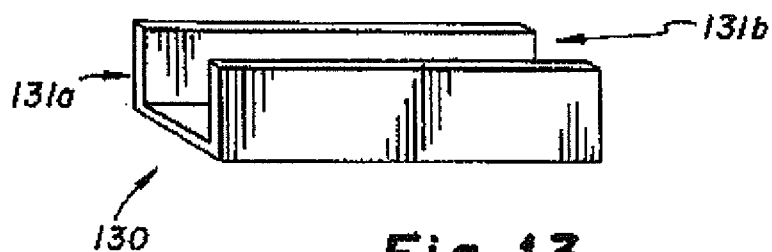


Fig. 13



EUROPEAN SEARCH REPORT

Application Number
EP 10 18 1784

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
Y	US 3 740 238 A (GRAHAM S) 19 June 1973 (1973-06-19) * column 2, line 58 - column 3, line 8; figures 2,3 *	1-15	INV. B65D75/58 B65D77/00
A	FR 1 327 914 A (DALAUDIER J.G.) 24 May 1963 (1963-05-24) * page 1, right-hand column, line 9 - line 34; figure 3 *	1-15	
Y	EP 0 488 967 A1 (ANGELINI CONSORT RICERCHE [IT]) 3 June 1992 (1992-06-03) * column 3, line 18 - column 4, line 18; figure 1 *	1-15	
A	PATENT ABSTRACTS OF JAPAN vol. 1997, no. 10, 31 October 1997 (1997-10-31) -& JP 09, 156677, A, (FUJI SEAL CO LTD), 17 June 1997 (1997-06-17) * abstract; figure 1 *	1-15	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (IPC)
			B65D
Place of search		Date of completion of the search	Examiner
Munich		17 February 2011	Vesterholm, Mika
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

2

EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 10 18 1784

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

17-02-2011

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
US 3740238	A	19-06-1973	NONE		
FR 1327914	A	24-05-1963	NONE		
EP 0488967	A1	03-06-1992	IT	220730 Z2	08-11-1993
			PT	99613 A	31-01-1994
JP 09156677	A	17-06-1997	NONE		

REFERENCES CITED IN THE DESCRIPTION

This list of references cited by the applicant is for the reader's convenience only. It does not form part of the European patent document. Even though great care has been taken in compiling the references, errors or omissions cannot be excluded and the EPO disclaims all liability in this regard.

Patent documents cited in the description

- US 4840270 A [0003]
- US 6026953 A [0003]
- US D447054 S [0003]
- US 20020182359 A [0003]